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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Application of:

BENJAMIN A. ROYER et al.

International Application No. PCT/EP03/02550

Serial No. 10/507,432

International Filing Date: 12 March 2003 (12.03.2003)

Filed: September 10, 2004

Title: ION CONDUCTING COMPOSITE MEMBRANE MATERIALS CONTAINING AN
OPTIONALLY MODIFIED ZIRCONIUM PHOSPHATE DISPERSED IN A POLYMERIC
MATRIX, METHOD FOR PREPARATION OF THE MEMBRANE MATERIAL AND ITS
USE

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

An Information Disclosure Statement is submitted herewith pursuant
to 37 C.F.R. § 1.97-1.98. Please note the following particulars:

[NOTE: One only of items a, b, c, and d must be checked.]

- [☒] a. The enclosed statement is being filed within three months of
the filing date of a national application, or within three
months of the date of entry into the national stage as set
forth in 37 C.F.R. § 1.491 in an international application, or
before the mailing date of a first Office Action on the
merits, whichever event occurs last.
- [☐] b. The enclosed statement is being filed after a first action on
the merits but before the mailing date of a final action under
37 C.F.R. § 1.113, or a notice of allowance under 37 C.F.R. §
1.311.

The enclosed statement is accompanied by [check one]:

- [☐] i. a certification in part (e) below as specified in 37
C.F.R. § 1.97(e), or
- [☐] ii. a check in the amount required by 37 C.F.R. §
1.17(p).
- [☐] c. The enclosed statement is being filed after the mailing date
of a final action under 37 C.F.R. § 1.113, or a notice of
allowance under 37 C.F.R. § 1.311, but before payment of the
issue fee.
- [☐] Certification report(e) below; and
- [☐] a check in the amount as required by § 1.17(p).
- [☐] d. The enclosed statement is being filed pursuant to 37 C.F.R. §
1.97(i), for placement in the file.
- [☐] e. Certification [Check one] [Certification is required
only if box (b)(i) or box (c) is checked.]
- [☐] I hereby certify that each item of information contained
in the enclosed Information Disclosure Statement was

cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement,

or

- [] I hereby certify that no item of information in the enclosed Information Disclosure Statement herewith was cited in a communication from a foreign patent office in a counterpart foreign application, or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

or

- [] Appropriate certification is attached.

- [X] f. If no check is enclosed and a fee is due in connection with this communication or if the check enclosed is insufficient, the Commissioner is authorized to charge any fee or additional fee due in connection with this communication to Deposit Account No. 14-0112.

- [X] g. Copies of the documents are attached herewith with a completed Form PTO-1449.

or

- [] Copies of the documents are not attached as allowed under CFR 1.98(d)(1)(2). The earlier application is identified as:
or Copies of US Patents/Publications not attached as allowed in Official Gazette Aug. 5, 2003/ Vol. 1273, no. 1.

The Examiner is respectfully requested to cite the documents listed on the attached Form PTO-1449 in the next Office Action. In so doing, the Examiner is respectfully requested to initial in the space adjacent to the listing of each document on the Form PTO-1449, and return a copy of the initialed Form PTO-1449 with the next communication to Applicants, to confirm that these documents have been considered by the Examiner and made of record in this application.

If the Examiner has any questions or wishes to discuss this application, kindly telephone the undersigned at the below-listed number.

Respectfully submitted,

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By: _____

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Date: December 16, 2004

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FORM PTO-1449

INFORMATION DISCLOSURE CITATION

Atty Docket
26334Serial No.
10/507,432Applicant
BAUER et al.Filing Date
Sept. 10, 2004Group Art Unit
Not Yet Assigned

U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Issue Date	Name	Class	Sub-Class	Filing Date
AA						
AB						

FOREIGN PATENT DOCUMENTS

	Document Number	Date	Country	Class	Sub-Class	Translation
AC						
AD						
AE						
AF						
AG						

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

AH	Alberti, G. et al. "Protonic conductivity of layered zirconium phosphonates containing -SO ₃ H groups. I. Preparation and characterization of a mixed zirconium phosphonate of composition Zr(O ₃ PR) _{0.73} (O ₃ PR') _{1.27} ·nH ₂ O, with R=-C ₆ H ₄ -SO ₃ H and R'=-CH ₂ -OH", <u>Solid State Ionics</u> , vol.50 pp.315-322, 1992.
AI	Alberti, G. et al. "Protonic conductivity of layered zirconium phosphonates containing -SO ₃ H groups. III. Preparation and characterization of γ-zirconium sulfoaryl phosphonates", <u>Solid State Ionics</u> , vol.84 pp.97-104, 1996.
AJ	Alberti, G. et al. "Preparation, characterization and proton conductivity of titanium phosphate sulfophenylphosphonate", <u>Solid State Ionics</u> , vol.145 pp.249-255, 2001.
AK	Clearfield, A. "Structural concepts in inorganic proton conductors", <u>Solid State Ionics</u> , vol.46 pp.35-43, 1991.
AL	Schutz, P. et al. "Materials for Medium Temperature Solid State Fuel Cells", Abstract No. 169 p.248-249, 1987.
AM	Alberti, G. et al. "Solid State protonic conductors, present main applications and future prospects", <u>Solid State Ionics</u> , vol.145 pp.3-16, 2001.
AN	Alberti, G. et al. "All Solid State Hydrogen Sensors Based on Pellicular α-Zirconium Phosphate as a Protonic Conductor", <u>Solid State Ionics</u> , vol.35 pp.153-156, 1989.
AO	Bonnet, B. et al. "Hybrid organic-inorganic membranes for a medium temperature fuel cell", <u>Journal of New Materials for Electromechanical Systems</u> , vol.3 pp.87-92, 2000.
AP	Norby, T. "Solid-state protonic conductors: principles, properties, progress and prospects", <u>Solid State Ionics</u> , vol.125 pp.1-11, 1999.

Examiner

Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP ' 609.
 Draw line through citation if not in conformance and not considered.
 Include copy of this form with next communication to Applicant.